

## About the Company

Thorlabs has been an active member of the Photonics community for over 20 years.

We strive to be the ultimate resource for the photonics community—a place to find the products you need to enable your experiments, as well as the information you need to get your application working.

Thorlabs designs, develops, and manufactures building blocks for the photonics industry including equipment for opto-mechanics, motion control, nano-positioning, alignment, optical components, laser diodes, tunable lasers and vibration isolation systems. In addition to core photonics building blocks, we now provide system level solutions including complete OCT and imaging systems.

## Trademarks

THORLABS is a registered trademark of Thorlabs Inc.

## Technical Support

Thorlabs provide a comprehensive after sales service. Contact us through your local representative, or at the address below:

### Thorlabs Ltd

Saint Thomas Place

Ely

Cambridgeshire CB7 4EX, UK

Tel: +44 (0) 1353 654440

Fax: +44 (0) 1353 654444

email: techsupport.uk@thorlabs.com

## Product Warranty

*Opto-Electronics, Control Electronics, Optics, and Nano-Positioning Product Lines.*

Thorlabs offers a two year warranty on the above mentioned product lines, provided normal use and maintenance of the products and when properly handled and correctly installed.

Thorlabs shall repair or replace any defective or nonconforming product as detailed above. We ask that buyer contact Thorlabs for a Return Material Authorization number (RMA #) from our Customer Service>Returns department in order to most efficiently process the return and/or repair.

Products returned for repair that are not covered under warranty, a Thorlabs standard repair charge shall be applicable in addition to all shipping expenses. This repair charge will be quoted to the customer before the work is performed.

## Customer Feedback

It is always helpful to have detailed and accurate information about any problems encountered by customers

We welcome comments or suggestions about any aspect of the equipment and instruction handbooks.



# DT12 Series 0.5" Dovetail Stages

## 1.1 Introduction

The DT12 dovetail translation stage is a miniature, entry level positioner, ideal for use in applications where space is limited. It is 1.0" (25.4mm) square yet provides a travel length of 0.5" (12.7mm). The design uses a precision rolled M3 x 0.35mm pitch lead screw for smooth linear positioning along the entire range of travel. The moving platform is lockable to guard against accidental movement. The modular design allows them to be assembled into 2 or 3 axis configurations. The 3 axis versions are supplied preconfigured with a right angled bracket (DT12A). Options for mounting to a worksurface comprise either a slotted baseplate (DT12B), or two mounting clamps (CL6) shown below.

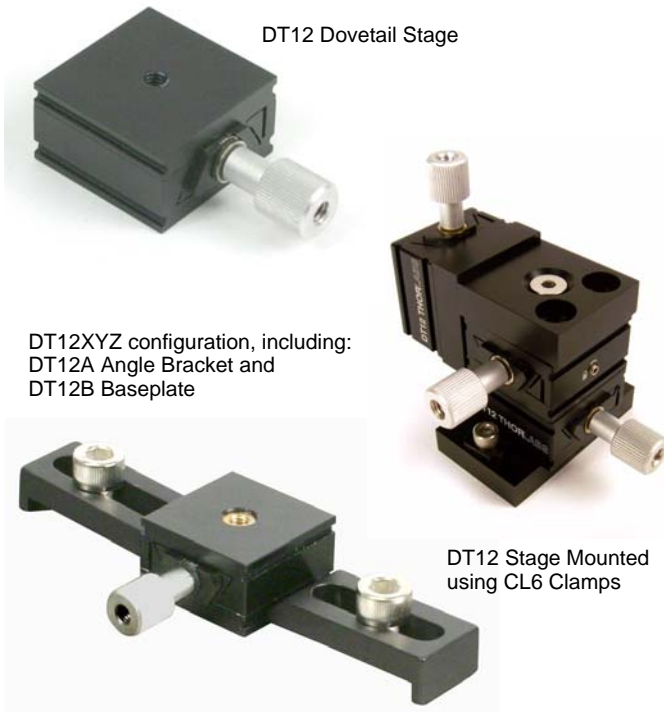


Fig. 1.1 DT12 Dovetail Stage and Accessories

The DT12RA enables a rotational axis to be added to other DT12 stage configurations, providing 360 degrees of movement in pitch, roll, or yaw.

If desired, another DT12 stage can be mounted to the rotation adapter as shown opposite. In this case, the rotation adapter must be removed from the configuration before the extra stage can be fixed to it.

The complete assembly can then be refitted.



Fig. 1.2 DT12XYZ with DT12RA and extra DT12 stage, fitted to an RC1 Rail Carrier

For attachment to other stages, contact Tech Support.

## 1.2 Specification

**Travel Range:** 12.7mm (0.5")

**Load Capacity:** Horizontal Mounting: 1.2 kg (2.5 lb)

Vertical Mounting: 0.25 kg (0.55 lb)

**Max Off-Axis Load:** 0.25 Nm

**Actuator Travel:** 0.35mm per revolution

**Construction:** Aluminum with Precision Steel Leadscrew

**Dimensions:** 25.4 x 45.4 x 14.8 mm (1 x 1.79 x 0.58 in.) (including actuator)

## 1.3 Precautions

**Caution**

When bolting accessories to the moving platform, do not exceed a screw insertion length of 3.5mm (9/64"). Do not apply excessive force to the moving platform.

## Notes

The DT12A/DT12B mounting brackets and the CL6 clamps are compatible with both imperial and metric stage versions, and are supplied with all necessary fixings and tools.

The DT12B baseplate is compatible with both imperial and metric worksurfaces.

## 1.4 Dimensions

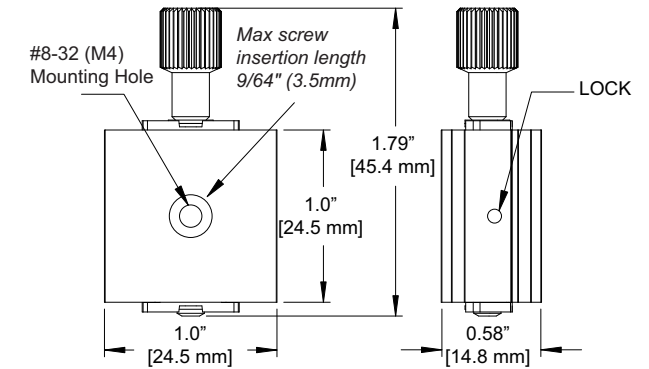


Fig. 1.3 DT12 Dimensions

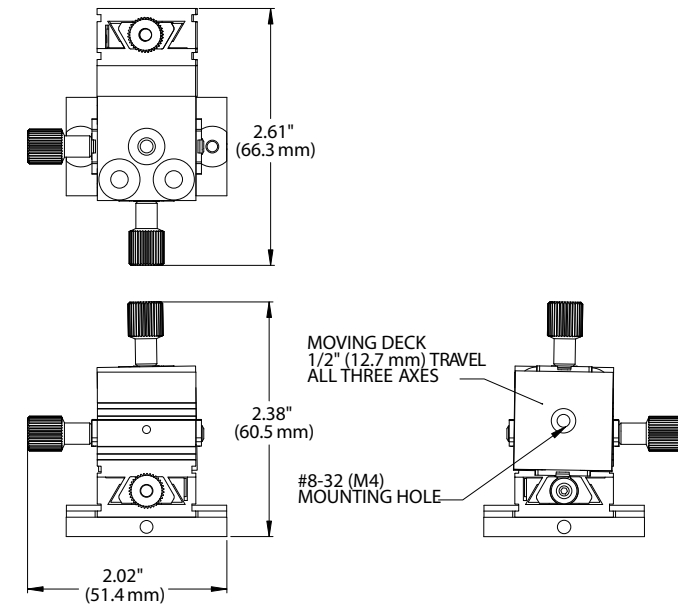
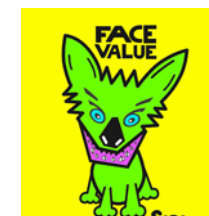


Fig. 1.4 DT12XYZ Dimensions



Thorlabs Inc.  
56 Sparta Ave  
Newton, NJ07860  
USA  
Tel: +1 973 579 7227  
Fax: +1 973 300 3600  
www.thorlabs.com

Thorlabs Ltd.  
Saint Thomas Place, Ely  
Cambridgeshire CB7 4EX,  
UK  
Tel: +44 (0) 1353 654440  
Fax: +44 (0) 1353 654444  
www.thorlabs.com